

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
COLUMBIA DIVISION**

THE SOUTH CAROLINA STATE
CONFERENCE OF THE NAACP, *et al.*,

Plaintiffs,

v.

THOMAS C. ALEXANDER, *et al.*,

Defendants.

Case No. 3:21-cv-03302-MGL-TJH-RMG

**SENATE DEFENDANTS' & HOUSE
DEFENDANTS' MOTION IN LIMINE TO
EXCLUDE THE TESTIMONY OF
PLAINTIFFS' PUTATIVE EXPERT
BAODONG LIU**

The Senate Defendants and the House Defendants¹ respectfully move to exclude the testimony of Plaintiffs' putative expert Baodong Liu on the ground that it fails to meet the demanding standards established by Federal Rule of Evidence 702 and *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). Dr. Liu lacks a "reliable foundation" for his proposed testimony regarding the Congressional Plan that Plaintiffs challenge in this action. *Daubert*, 509 U.S. at 597. Indeed, Dr. Liu committed the same fundamental error as the putative expert that this Court rejected ten years ago in *Backus v. South Carolina*: by his own admission, he "failed to consider all the traditional race-neutral principles that guide redistricting in South Carolina." *Backus v. South Carolina*, 857 F. Supp. 2d 553, 563 (D.S.C.), *aff'd*, 568 U.S. 801 (2012). Thus, his proposed testimony and evidence are "problematic," "incomplete," and "unconvincing," and he is "unable to provide the Court a reliable opinion that the General Assembly subordinated

¹ The Senate Defendants are Thomas C. Alexander, in his official capacity as President of the Senate, and Luke A. Rankin, in his official capacity as Chairman of the Senate Judiciary Committee. The House Defendants are James H. Lucas, in his official capacity as Speaker of the House of Representatives, Chris Murphy, in his official capacity as Chairman of the House of Representatives Judiciary Committee, and Wallace H. Jordan, in his official capacity as Chairman of the House of Representatives Elections Law Subcommittee. On May 12, 2022, James H. Lucas stepped down as Speaker of the South Carolina House of Representatives. The current Speaker of the House is Representative G. Murrell Smith, Jr.

traditional race-neutral principles to race.” *Id.* at 562–63. The Court should exclude Dr. Liu’s proposed testimony and evidence for this reason alone. *See id.*

The reasons to exclude Dr. Liu’s proposed testimony and evidence do not end there. Even with respect to the criteria that Dr. Liu did consider, he did not utilize “reliable” methods or identify “good grounds” for his opinions. *Daubert*, 509 U.S. at 590, 597. In fact, Dr. Liu ignored that his opinions cannot be squared with his own analysis and data. And, in all events, Dr. Liu’s testimony is not “relevant to the task at hand” because it at most pertains to hypothetical circumstances that do not even remotely resemble the actual circumstances surrounding the enactment of the Congressional Plan—the “pertinent inquiry” here. *Id.* at 597. The Court should exclude Dr. Liu’s testimony and evidence.²

BACKGROUND

Dr. Liu is a political science professor at the University of Utah who filed a report in this case. *See* Liu Rep. 2 (Ex. 1). Plaintiffs have proffered Dr. Liu as an expert and intend to call him as a witness at trial. Dkt. No. 331 at 1.

Dr. Liu seeks to offer testimony and evidence regarding his “effectiveness analysis,” “empirical test of race vs. party,” and “verification study of race vs. politics.” Liu Rep. 11, 14, 19 (Ex. 1). Based on his “effectiveness analysis,” Dr. Liu wishes to opine that “[b]lack voters” have less “opportunity to elect their preferred candidates” under the Congressional Plan compared to alternative proposals. *Id.* at 21. Based on his “empirical test” and “verification study,” Dr. Liu seeks to opine that “there is strong empirical evidence that race, rather than presumed party affiliation, is a driving factor in whether voters remain or are moved in and out of the districts

² Because this motion contains a full explanation, a supporting memorandum would serve no useful purpose. *See* Local Civil Rule 7.04 (D.S.C.). Further, after consultation, Plaintiffs declined to withdraw Dr. Liu as an expert. *See* Local Civil Rule 7.02 (D.S.C.).

challenged by Plaintiffs, particularly CDs 1 and 2, in the [Congressional] Plan.” *Id.*; *see also id.* at 5–6.

Dr. Liu’s “effectiveness analysis” proceeded by attempting to compare the ability of “[b]lack voters ... to elect the candidates of their choice” in four state-wide elections under the Congressional Plan and alternative plans. *Id.* at 12. The “empirical test” and “verification study” used “race and party” registration data to compare, respectively, the numbers of black Democrats, black Republicans, white Democrats, and white Republicans who were moved into and out of Districts 1 and 2. *See id.* at 14–21. Dr. Liu performed similar analyses with respect to District 5 but did not include them in his report because they did not support his ultimate opinions. Liu Tr. 138:17–139:9 (Ex. 2).

Dr. Liu admitted that each of his analyses did not consider almost every traditional race-neutral principle used in redistricting in South Carolina:

- Preserving the cores of districts;
- Compactness;
- Contiguity;
- Protecting incumbents;
- Avoiding voting district splits;
- Avoiding county and municipality splits; and
- Preserving communities of interest.

Liu Tr. 90:19–23, 126:7–127:24, 143:25–144:7 (Ex. 2); *see also Backus*, 857 F. Supp. 2d at 562–63 (identifying traditional districting principles); *Colleton Cnty*, 201 F. Supp. 2d at 647, 649 (same); Dkt. No. 323 at 12 (same).

LEGAL STANDARD

A party offering expert testimony “has the burden of establishing that the pertinent admissibility requirements are met by a preponderance of the evidence.” Fed. R. Evid. 702 advisory committee’s note (citing *Bourjaily v. United States*, 483 U.S. 171, 176 (1987)). “A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise” if:

- (a) the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (b) the testimony is based on sufficient facts or data;
- (c) the testimony is the product of reliable principles and methods; and
- (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702.

These requirements are “exacting.” *Weisgram v. Marley Co.*, 528 U.S. 440, 455 (2000). Thus, as *Daubert* explains, Rule 702 imposes a “special gatekeeping obligation” on the district court to ensure that an expert’s testimony “rests on a reliable foundation” and “is relevant to the task at hand.” *Sardis v. Overhead Door Corp.*, 10 F.4th 268, 281 (4th Cir. 2021) (quoting *Nease v. Ford Motor Co.*, 848 F.3d 219, 229 (4th Cir. 2017)).

To be reliable, expert testimony must be “‘based on scientific, technical, or other specialized *knowledge* and not on belief or speculation,’” and “to the extent an expert makes inferences based on the facts presented to him,” the inferences must be “‘derived using scientific or other valid methods.’” *Id.* (quoting *Oglesby v. Gen. Motors Corp.*, 190 F.3d 244, 250 (4th Cir. 1999)). The reliability analysis focuses on the expert’s “‘principles and methodology’” and is informed by four “guideposts” set out in *Daubert*: “(1) whether the expert’s theory or technique ‘can be (and has been) tested’; (2) ‘whether the theory or technique has been subjected to peer

review and publication’; (3) ‘the known or potential rate of error’ inherent in the expert’s theory or technique; and (4) whether the expert’s methodology is generally accepted in his field of expertise.” *Id.* (quoting *Daubert*, 509 U.S. at 593–95). These guideposts are not exhaustive, however, and courts often consider additional factors, including “whether the expert’s analysis leaves unexplained analytical gaps and whether the expert has reasonably accounted for alternative explanations.” *Nucor Corp. v. Bell*, No. 2:06-CV-02972, 2008 WL 4442571, at *2 (D.S.C. Jan. 11, 2008); *see Cooper v. Smith & Nephew, Inc.*, 259 F.3d 194, 202 (4th Cir. 2001); *In re Pella Corp. Architect & Designer Series Windows Mktg., Sales Pracs. & Prod. Liab. Litig.*, 214 F. Supp. 3d 478, 494 (D.S.C. 2016). In short, because faulty expert testimony can be “quite misleading,” *Daubert* aims to ensure that such testimony is based on “‘intellectual rigor’” rather than the “ipse dixit” of the putative expert. *In re Lipitor Mktg., Sales Pracs. & Prod. Liab. Litig.*, 892 F.3d 624, 631–32 (4th Cir. 2018) (quoting *Kumho Tire Co.*, 526 U.S. at 152); *see also Holesapple v. Barrett*, 5 F. App’x 177, 179 (4th Cir. 2001).

Moreover, to be relevant, expert testimony must have “a valid scientific connection to the pertinent inquiry.” *Sardis*, 10 F.4th at 281 (quoting *Belville v. Ford Motor Co.*, 919 F.3d 224, 232 (4th Cir. 2019)). “This ensures that the expert ‘helps the trier of fact to understand the evidence or to determine a fact in issue.’” *Id.* (quoting *Nease*, 848 F.3d at 228).

ARGUMENT

The Court should exclude Dr. Liu’s proposed testimony and evidence because Plaintiffs cannot show that they are sufficiently reliable or relevant to satisfy Rule 702, *Daubert*, and its progeny.

I. DR. LIU FAILED TO CONSIDER ALL TRADITIONAL RACE-NEUTRAL PRINCIPLES

Dr. Liu’s proposed testimony and evidence fail—and should be excluded—at the threshold because he “failed to consider all the traditional race-neutral principles that guide redistricting in South Carolina.” *Backus*, 857 F. Supp. 2d at 563. Thus, Plaintiffs cannot show that his testimony is “based on sufficient facts or data” or “is the product of reliable principles and methods,” or that Dr. Liu “reliably applied the principles and methods to the facts of the case.” Fed. R. Evid. 702(b)–(d).

Indeed, Dr. Liu’s proffered testimony lacks “intellectual rigor,” *In re Lipitor Mktg., Sales Pracs. & Prod. Liab. Litig.*, 892 F.3d at 631–32, and does not satisfy the “exacting standards of reliability [it] must meet,” *Sardis*, 10 F.4th at 299 (quoting *Weisgram*, 528 U.S. at 455). After all, his analysis does not “as a matter of logic ... eliminate other equally plausible causes” of the features of the Congressional Plan he observes and therefore is inadmissible. *Goodman v. Revco Disc. Drug Centers, Inc.*, No. 3:03-CV-2657, 2005 WL 6740407, at *4 (D.S.C. Aug. 18, 2005) (quoting *Oglesby v. Gen. Motors Corp.*, 190 F.3d 244, 250 (4th Cir. 1999)); see *Templeton v. Bishop of Charleston*, No. 2:18-CV-02003, 2021 WL 3419442, at *6 (D.S.C. Aug. 5, 2021); *In re Pella Corp.*, 214 F. Supp. 3d at 483–85, 490, 498; *In re Lipitor Mktg., Sales Pracs. & Prod. Liab. Litig.*, 185 F. Supp. 3d 761, 781–82 (D.S.C. 2016); *Bishop v. Triumph Motorcycles (Am.) Ltd.*, No. 3:18-CV-186, 2021 WL 4316810, at *8 (N.D.W. Va. Sept. 22, 2021); *Hall v. Thomas*, 753 F. Supp. 2d 1113, 1149 (N.D. Ala. 2010); see also *In re Wholesale Grocery Prod. Antitrust Litig.*, 946 F.3d 995, 1003 (8th Cir. 2019) (affirming exclusion of expert whose analysis “failed to incorporate economic realities”).

Dr. Liu proposes to opine that race was “a driving factor” in the Congressional Plan based on his “empirical test of race vs. party” and a “verification study of race vs. politics.” Liu Rep. 6,

14, 19 (Ex. 1). But Dr. Liu admitted that these methods did not consider virtually every traditional race-neutral principle used in redistricting in South Carolina:

- Preserving the cores of districts;
- Maintaining compactness;
- Maintaining contiguity;
- Protecting incumbents;
- Avoiding voting district splits;
- Avoiding county and municipality splits; and
- Preserving communities of interest.

Liu Tr. 126:7–127:24, 143:25–144:7 (Ex. 2); *see also Backus*, 857 F. Supp. 2d at 562–63 (identifying traditional districting principles); *Colleton Cnty*, 201 F. Supp. 2d at 647, 649 (same); Dkt. No. 323 at 12 (same). Indeed, as Dr. Liu candidly acknowledged, “I’m not a scholar of, say, community of interest or compactness or other principles,” so “[I’m] by no means ... eligible to provide my expertise or testimony to the court on those matters.” Liu Tr. 90:19–23 (Ex. 2).

Thus—like the putative expert this Court rejected in *Backus*—Dr. Liu’s proposed testimony is “problematic,” “incomplete,” and “unconvincing,” and he is “unable to provide the Court a reliable opinion that the General Assembly subordinated traditional race-neutral principles to race.” *Backus*, 857 F. Supp. 2d at 562–63. The Court should exclude Dr. Liu’s proposed testimony for this reason alone. *See id.*; *see also* Fed. R. Evid. 702; *In re Lipitor Mktg., Sales Pracs. & Prod. Liab. Litig.*, 892 F.3d at 631–32; *Sardis*, 10 F.4th at 299.

II. DR. LIU DID NOT RELIABLY ANALYZE THE RACE-NEUTRAL CRITERIA HE DID CONSIDER

Dr. Liu’s failure to consider all traditional race-neutral principles alone warrants exclusion of his testimony. *See supra* Part I. But Dr. Liu’s testimony should be excluded on another basis

as well: he did not reliably analyze the criteria that he did consider. Thus, his testimony is not “based on sufficient facts or data” or “the product of reliable principles and methods,” and Dr. Liu did not “reliably appl[y] the principles and methods to the facts of the case.” Fed. R. Evid. 702(b)-(d).

For at least three reasons, Dr. Liu’s views suffer from major “analytical gap[s],” lacks a reliable foundation, and are inadmissible. *In re Pella Corp.*, 214 F. Supp. 3d at 494; *see Nucor Corp.*, 2008 WL 4442571, at *2. First, Dr. Liu’s own analysis defeats his opinion that “race, rather than presumed party affiliation, is a driving factor” in the Congressional Plan. Liu Rep. 21 (Ex. 1). As his “empirical test” shows, the Congressional Plan moves far more Democratic voters than black voters across the two districts he examines. Specifically, according to Dr. Liu’s own charts:

- The Plan moves a net of 1,213 black voters out of District 1,³ but a net of 4,591 Democratic voters—*nearly four times as many*—out of District 1.⁴
- The Plan moves a net of 441 black voters into District 2,⁵ but a net of 1,153 Democratic voters—more than two-and-a-half times as many—out of District 2.⁶

Thus, even under Liu’s own approach, the political effect of the Congressional Plan’s changes to Districts 1 and 2 was far more pronounced than any racial effect. Dr. Liu’s self-rebutting testimony that race trumped politics is not based on “sufficient facts or data” nor “reliable principles and methods.” Fed. R. Evid. 702(b)–(c).

³ 3,640 black Democrats + 164 black Republicans “out” minus 2,176 black Democrats + 415 black Republicans “into.” Liu Rep. 16 tbl. 6 (Ex. 1).

⁴ 3,651 white Democrats + 3,640 black Democrats “out” minus 524 white Democrats + 2,176 black Democrats “into.” *Id.*

⁵ 930 black Democrats + 17 black Republicans “into” minus 496 black Democrats + 10 black Republicans “out.” *Id.* at 18 tbl. 7.

⁶ 1,682 white Democrats + 496 black Democrats “out” minus 95 white Democrats + 930 black Democrats “in.” *Id.*

Second, Dr. Liu cherry-picked data that favored his conclusion while deliberately omitting data that undermined it. In particular, Dr. Liu chose to omit his analysis of District 5 from his report because it did not support his conclusion that “race is a factor” in the Congressional Plan. Liu Tr. 138:17–25 (Ex. 2). As Dr. Liu admitted in his deposition (but studiously declined to mention in his report), he omitted his District 5 analysis because “I just cannot use CD 5 to draw the same conclusion, [as] the data is not sufficient to show either way.” *Id.* at 138:17–139:9. Dr. Liu’s decision to “cherry-pick” certain data and “exclude *his own* contrary analyses from his report” is “unacceptable under *Daubert* and Rule 702.” *In re Lipitor Mktg., Sales Pracs. & Prod. Liab. Litig.*, 145 F. Supp. 3d 573, 587, 592–93 (D.S.C. 2015) (collecting cases); *see In re Lipitor Mktg., Sales Pracs. & Prod. Liab. Litig.*, 174 F. Supp. 3d 911, 931–32 (D.S.C. 2016) (similar).

Third, Dr. Liu opined that “[b]lack voters” have less “opportunity to elect their preferred candidates” under the Congressional Plan compared to alternative proposals, Liu Rep. 21 (Ex. 1); *see id.* at 11–14, but he conceded that his own analysis and data showed “significant white crossover voting” in the alternative plans he analyzed, Liu Tr. 74:25–75:9, 81:15–23 (Ex. 2), and that “[w]hite crossover is crucial,” *id.* 89:11. Dr. Liu also conceded that “this is not a Section 2 case” and that Plaintiffs do not seek creation of a majority-black district. *Id.* at 65:14–15, 91:3–4. In fact, in at least some of the alternative districts he believes could be effective for black-preferred candidates, the BVAP is as low as 21%, indicating “significant” white crossover voting. *Id.* at 74:25–75:9, 80:14–82:17.

But Dr. Liu *never* reported the amount of white crossover voting in any of the alternative plans or districts he analyzed. *See id.* at 80:14–82:17. He also never squared the presence of “significant” white crossover voting with his conclusion that “[b]lack voters” have less “opportunity to elect their preferred candidates” under the Congressional Plan. Liu Rep. 21

(Ex. 1); *see id.* at 11–14. In fact, because all of the “black preferred candidates” in Dr. Liu’s analysis are Democrats, *all* Democratic voters, regardless of whether they are black voters or white crossover voters, have less opportunity to elect their preferred candidates in the Congressional Plan compared to Plaintiffs’ preferred alternative plans.

Thus, Dr. Liu’s effectiveness analysis underscores an essential component of Plaintiffs’ burden in this case: their burden to decouple race from politics and demonstrate that “race *rather than* politics *predominantly*” motivated the Congressional Plan. *Easley v. Cromartie*, 532 U.S. 234, 243 (2001). But to the extent Dr. Liu’s effectiveness analysis answers that question, it points *away* from Plaintiffs’ preferred answer because it shows that the Congressional Plan results in less electoral opportunity for *all* Democratic voters *regardless* of race and not for any voters *because* of their race. *See id.* Once again, Dr. Liu’s decision to “cherry-pick” data concerning *black* Democratic voters and “exclude *his own* contrary” data and analyses concerning *white* Democratic voters “from his report” is “unacceptable under *Daubert* and Rule 702.” *In re Lipitor Mktg., Sales Pracs. & Prod. Liab. Litig.*, 145 F. Supp. 3d at 587, 592–93; *see In re Lipitor Mktg., Sales Pracs. & Prod. Liab. Litig.*, 174 F. Supp. 3d at 931–32. The Courts should exclude Dr. Liu’s proposed testimony and evidence.

III. PLAINTIFFS CANNOT SHOW THAT DR. LIU’S TESTIMONY IS RELEVANT

Plaintiffs’ inability to establish reliability alone warrants the exclusion of Dr. Liu’s testimony. But the testimony should be excluded for another reason: Plaintiffs cannot show that Dr. Liu’s analysis is “relevant to the task at hand.” *Sardis*, 10 F.4th at 281. In particular, Plaintiffs cannot demonstrate that Dr. Liu’s analysis has a “valid scientific connection” to whether the General Assembly committed racial gerrymandering or intentional discrimination in enacting the Congressional Plan. *Id.*

As noted, Dr. Liu admitted that his “empirical test” and “verification study” ignored almost every traditional race-neutral districting principle. *See supra* at 3. Rather than accounting for these principles, Dr. Liu concededly considered *only* “race and party” and “[did not] control for any other factors.” Liu Tr. 143:24–144:2 (Ex. 2). Thus, to the extent that Dr. Liu’s approach is reliable at all, it at most examines how the General Assembly hypothetically might have conducted redistricting if it were concerned exclusively with only one race-neutral principle (partisan performance). But that is not relevant here, because no evidence suggests that the General Assembly followed that principle alone; to the contrary, the General Assembly undisputedly adhered to numerous other race-neutral principles. *See* Dkt. No. 323 at 16–20. Dr. Liu’s analysis thus lacks a “valid scientific connection” to the General Assembly’s actual redistricting actions in the Congressional Plan. *Sardis*, 10 F.4th at 281.

Put another way, Dr. Liu’s “empirical test” and “verification study” are at most relevant to understanding hypothetical circumstances that do not remotely resemble the actual circumstances surrounding the enactment of the Congressional Plan. Such analysis is not relevant to understanding the Congressional Plan—the “pertinent inquiry” here—and therefore should be excluded. *Id.*

For similar reasons, Dr. Liu’s “effectiveness analysis” is not relevant either. Because Dr. Liu addressed only black Democratic voters and not white Democratic voters, his analysis does not decouple race from politics and, at most, demonstrates only that *Democrats*—black *and* white—are less able to elect their preferred candidates under the Congressional Plan. His analysis is not relevant to determining whether the Congressional Plan subordinates traditional districting principles to race or evinces an intent to diminish black voters’ ability to elect their preferred

candidates. Thus, Dr. Liu’s effectiveness analysis likewise lacks a “valid scientific connection to the pertinent inquiry” and should be excluded. *Sardis*, 10 F.4th at 281.

CONCLUSION

The Court should exclude the testimony of Dr. Liu.

September 2, 2022

Respectfully submitted,

/s/ Robert E. Tyson Jr.

Robert E. Tyson, Jr. (7815)
Vordman Carlisle Traywick, III (12483)
La’Jessica Stringfellow (13006)
ROBINSON GRAY STEPP & LAFFITTE, LLC
1310 Gadsden Street
Post Office Box 11449 (29211)
Columbia, South Carolina 29201
(803) 929-1400
rtyson@robinsongray.com
ltraywick@robinsongray.com
lstringfellow@robinsongray.com

John M. Gore (admitted *pro hac vice*)
Stephen J. Kenny (admitted *pro hac vice*)
JONES DAY
51 Louisiana Avenue, N.W.
Washington, D.C. 20001
Phone: (202) 879-3939
Fax: (202) 626-1700
jmgore@jonesday.com
skenny@jonesday.com

Counsel for Senate Defendants

/s/ Mark C. Moore

Mark C. Moore (Fed. ID No. 4956)
Jennifer J. Hollingsworth (Fed. ID No. 11704)
Hamilton B. Barber (Fed. ID No. 13306)
Michael A. Parente (Fed. ID No. 13358)
NEXSEN PRUET, LLC
1230 Main Street, Suite 700
Columbia, SC 29201
Telephone: 803.771.8900
MMoore@nexsenpruet.com
JHollingsworth@nexsenpruet.com

HBarber@nexsenpruet.com
MParente@nexsenpruet.com

William W. Wilkins (Fed. ID No. 4662)
Andrew A. Mathias (Fed. ID No. 10166)
Konstantine P. Diamaduros (Fed. ID No. 12368)
NEXSEN PRUET, LLC
104 S. Main Street, Suite 900
Greenville, SC 29601
Telephone: 864.370.2211
BWilkins@nexsenpruet.com
AMathias@nexsenpruet.com
KDiamaduros@nexsenpruet.com

Rhett D. Ricard (Fed. ID No. 13549)
NEXSEN PRUET, LLC
205 King Street, Suite 400
Charleston, SC 29401
Telephone: 843.720.1707
RRicard@nexsenpruet.com

Counsel for House Defendants